



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

LITERATURE.

The Mind of Man, by GUSTAV SPILLER. Swar. Sonnenschein and Co., London, and The MacMillan Co., New York, 1902. pp. xiv and 552.

This book is a general treatise on psychology, "more especially designed for the use of students." The work has a serious mission, for it is a voice raised against "the amazing backwardness of psychology" to protest that not only have "the elementary principles of psychology . . . still to be established;" but that, "from the scientific point of view, no serious attempt has yet been made in that direction." It "will have fulfilled its author's purpose if it accentuates the need of, and assists in establishing, a psychology of a strictly scientific character." The 'amazing backwardness of psychology' is said to be chiefly due "to its having been almost exclusively cultivated by philosophers or those philosophically inclined." To this general cause, may be added the psychologists' anxiety "to systematize that which they had not previously examined," the substitution of hypothesis for empirical data, the admitted failure of introspection (!) and the erroneous conception of experiment. The author's 'new' method involves minute observation completed by generalization. It should be added, however, that "psychology, jealously separated from physiology, . . . cannot supply us with a consistent account of the facts of mind;" hence "it is in neurology, or brain science, coupled with introspection, that our hope ultimately lies." The new method is not to be confused, the author explains, with that used by "scholars of the psychological laboratory." "After reviewing what is practically the whole field of psychophysics," he draws the following vivid picture of the laboratory and its work. For the purpose of examining psychological facts experimentally, "laboratories are fitted up, containing the necessary appliances. All the customary scientific checks are employed. The number of experiments is recorded, as well as the persons experimented upon. The time of each experiment is determined by electric clocks which generally mark thousandths of a second and which are usually stopped by pressing a button on which the hand already rests. In short, these experiments are distinguished by an ingenuity and a care which is scarcely exceeded in physical inquiries." The picture reveals in a quaint but striking way the methods and the limitations of the artist. Such caricatures of the laboratory have almost disappeared, even from newspapers; one hardly expects them from the critic of psychological systems.

When Mr. Spiller drops the rôle of iconoclast and begins to write positively, his writing greatly improves. He offers as a definition of psychology the following statement. "Psychology treats of the nature and the satisfaction of those distinctive needs which are connected with the central nervous system, and this it treats of in systematic conjunction with the system of sights, sounds, smells, etc., which are developing concurrently, *i. e.*, psychology treats of the needs which arise out of the relations of the various systems in the organism, and out of the relations of that organism to its environment." The 'central needs' with which psychology deals are elsewhere defined as "functional tendencies inherent in the central system under the particular conditions of any moment." These needs are followed by processes which tend to satisfy them, but neither the need nor its satisfaction is necessarily conscious. "A complete psychology would, for instance, tell

us what is the effect of an empty stomach on the nervous system and proceed to enumerate the physiological changes which supervene until the requisite food reaches the stomach. Some of these changes would be represented by feelings, sensations and ideas; but the overwhelming majority of them would not be shadowed by any feelings which were directly observable. Thus one department of psychology would trace the physiological processes connected with central needs, while another would deal with the accompanying facts of feeling."

Now it is from the point of view of these central needs that consciousness is considered throughout the book. The need is the 'stimulus' to any given consciousness; and it is, moreover, its *raison d'être*. Consciousness is representative of organic function and can properly be understood only in the light of the functional tendencies that initiate, determine and control it. Instead of referring to 'consciousness,' however, the author usually employs the term 'system,' which he defines as "anything given whatsoever," *i. e.*, a sensation, a feeling, an image, a train of thought or action, or what not.

Systems once set into activity as the expression of needs on their way to satisfaction, may be considered from several points of view. (1) *Systems as distributed* (ch. ii), *i. e.*, as broken up, differentiated, in attention, without which a system exists only as a "vague detailless feeling." Attention is synonymous with 'neural activity.' "Its total quantity" is constant and limited. Distribution of systems rests therefore upon distribution of neural activity. (2) *Systems as organized* (ch. iii). Organization takes place in the form of habit and under the pressure of needs. "The needs of our nature are the source of organized trends of every description, as indeed of every task. They represent a definite neural sensibility which enables the work to proceed." "All habits and thoughts are more or less organized secondary complexes." The sanction for organization is found in its economy. "Attention energy is limited while our desires tend to be boundless." "Hence a struggle for the field of consciousness ensues, as a result of which thought is simplified." (3) *Systems as need-satisfying* (ch. iv). Under this heading, stand various effects of organization and economization upon the satisfaction of needs. The chapter is inconsequent and rambling. It seems to be the most convenient place in the book "to talk of many things." The author dwells, *inter alia*, upon the *terminus ad quem* as a factor in association (*cf.* Stout's 'continuity of interest'). (4) *Systems as redeveloped* (ch. v). Memory is considered as 'secondary' systems (reproductions) which play a part in the satisfaction of needs. Mr. Spiller here misses the opportunity to draw the natural functional distinction between perception and memory as resting upon different needs and different modes of satisfaction. (5) *Systems as disturbed* (ch. vi.). The disturbance of systems yields pleasure and pain and implies a decided loss of neural equilibrium, accompanied by a temporary disorganization of thought and action. It is "an exceptional state which has to be met in an exceptional way." The disturbance further implies a fundamental and urgent need for protecting the organism 'from swift disaster' and for restoring 'neural tranquillity.' But pleasure and pain are not the sole or even the usual determinants of thought and action. Thought and action are determined by 'our organized needs,' in general, which "normally realize themselves according to inherited and acquired inclinations, and not as the result of disturbances." In the author's collected 'opinions of psychologists' on affective theory, one misses the names of Wundt, Münsterberg, Külpe, Meynert and Lehmann. Here, as elsewhere in the volume, there is a lack of perspective. (6) *Systems as need-determined* (ch. vii). This chapter contains the main thesis of the book; *i. e.*, that "psychology only knows of needs and the process by which

these needs satisfy themselves." It also contains an account of 'will' as expression of organized needs pressing for fulfillment. The present writer was disappointed that a frankly functional account of will should have been satisfied with a superficial classification of needs into 'perennial,' 'periodic,' 'personal,' 'peculiar,' 'political' and 'passing.' The list is also incomplete, closely as it presses the limits of alliteration. One looks, moreover, for a more exact and searching inquiry into how, in particular, needs are satisfied,—for a description of the need as it actually works itself out. (7) *Systems as unified* (ch. viii). This chapter includes a series of little essays—most of them immature or inadequate—on subjects connected, nearly or remotely, with the author's theory of monism, the monism of the school of 'Immanence.'

Chapter viii closes the part of the volume devoted to 'general analyses.' The next three chapters are brought under the somewhat ambiguous Spencerian rubric, 'special syntheses.' They discuss the dependency of the individual (especially the genius) upon social environment, and the organization of character through needs (*Systems as individualized*, ch. ix); the various levels of psychophysical activity, hard thinking, casual thought, dreams, hallucinations, the animal consciousness, etc. (*Systems as classified*, ch. x); and æsthetic apprehension as dependent upon a specific need furnished by the attention (*Systems as attention-determined*, ch. xi). The volume closes with a brief and succinct summary of the whole treatise.

Throughout the work just outlined, the author displays a happy gift of introspection. His pages, are, as a result, rich in illustrative material, for which psychologists of every school (save only those few who taboo introspection, interrogating by preference their apparatus instead of their observers) will be grateful. If one were to pass a general criticism upon Mr. Spiller's use of this material, one would say, however, that he employed it too little by way of illustration and too much by way of inductive proof. Take two instances. On the basis of casual observation of three orang-outangs who were watched "a few times for several hours together," the author makes the sweeping assertion that "we are therefore justified in stating that at least one species besides the human possesses intelligent thought determined by a continuous and equal current of neural energy," and, further, that "the various capabilities of the higher animals differ only in trifling details." Again, casual observation—by no means carefully made—of the visual after-image leads to general inductions regarding the conscious effects of retinal stimulation. Think of the years of serious painstaking work spent upon the after-image, and then consider the value of a few uncontrolled observations! Who would expect a student of physics to learn the laws of mechanics or of optics with such appliances as "a red table cloth and a lamp with a green shade?" The author fails to realize that the science of mind is as far removed from popular psychology as physics is from parlor magic. The viciousness of such teaching is not to be condoned, in spite of such guileless and humane recommendations as that the student himself observe and "experiment with domesticated animals carefully avoiding any unkindness."

Mr. Spiller, in attempting to introduce a new method and to remodel the psychological system, has proposed to himself a difficult task. The way of the revolutionist is hard, especially if the revolutionist, by wholesale denunciation of standard work, provoke the charge of rash amateurism. The psychological value of the book lies neither in its iconoclastic proposals nor in its method (which, in so far as it has scientific value, is not new) but in its point of view. It is the most frankly and consistently 'functional' psychology yet written. An 'activity' psychology always invokes some extra-psychological aid,

whether from 'unconscious ideas,' or 'association,' or 'dispositions,' or a 'self,' or a set of physiological functions. Our author has chosen to appeal to biology; to make consciousness a part of the response to, the reaction upon, a need, an unfulfilled function of the organism. The particular physiological powers invoked, the appeal to 'inmost nervous centres,' to 'neural momentum,' 'inclination,' 'disturbance,' etc., will hardly pass unchallenged by the physiologist, but the general procedure is legitimate and leads, moreover, to interesting and valuable results—if only these results be not confused with psychology as a whole. It leads to valuable results because consciousness, considered as a set of functions, performs at least a part of its work in the service of the organism and if it is thus considered, entirely without reference to the organism, the functions lose much of their significance.

Mr. Spiller's conception of consciousness as *habitual function* is deserving of notice. For him, consciousness appears, not in a moment of organic hesitation or indecision, where organization is insufficient for a presented emergency, but, on the contrary, as the expression of a ready-made and preformed process of reaction. Thinking is, on this theory, habituated reaction, and not essentially new adjustment or even delayed adjustment. "To act as we have acted before, is normal to all life," and "thought is the reproduction of what is relevant." It is not easy to reconcile this position with the commonly accepted view which correlates consciousness with readjustment, makes delayed reaction responsible for mental development, and discovers in learning the criterion of mind (*cf.* W. James, *Psychology*, I, 142; M. F. Washburn, *Phil. Rev.*, XIII, 622).

The psychology of *The Mind of Man*, may be called 'reactionism' in contradistinction to 'representative atomism.' In place of direct psychophysical analysis, it offers a series of combined 'systems' which appear as functional adjustments. Thought and action come as the answer to certain needs that have been laid upon the organism by the conditions of life. Reactionism—especially interesting at present because of its relation to pragmatic doctrine—and atomism imply complementary procedures in psychology. The former deals with psychophysical responses to organic demands; the latter analyzes consciousness into 'elements,' which it correlates with relatively simple forms of physical stimulus. The one emphasizes organic conditions of mind; the other, extra-organic conditions. The one refers consciousness back to functional habits of response; the other refers consciousness back to a world of physical objects playing upon the sensitive organism. The one emphasizes activity; the other analysis. The one exalts organic tendency to the neglect of external influence; the other exalts physical causes and conditions to the neglect of organic and organized response. Only a synthesis of the two positions can give a complete and adequate account of mind whether of man or of any other conscious creature.

Mr. Spiller has added to his book a good index and an extensive bibliography which is, however, neither complete nor representative of the whole field of psychological literature.

Cornell University.

I. M. BENTLEY.

Principles of Physiological Psychology by Wilhelm Wundt; translated from the fifth German edition by EDWARD BRADFORD TITCHENER; Vol. I, pp. xvi+347. London: Swan Sonnenschein and Co.; New York: The Macmillan Co., 1904. Price \$3.00..

The debt of English speaking psychologists to Prof. Titchener, already considerable, has been materially increased by the publication of the first volume of his translation of Wundt's monumental *Grund-*